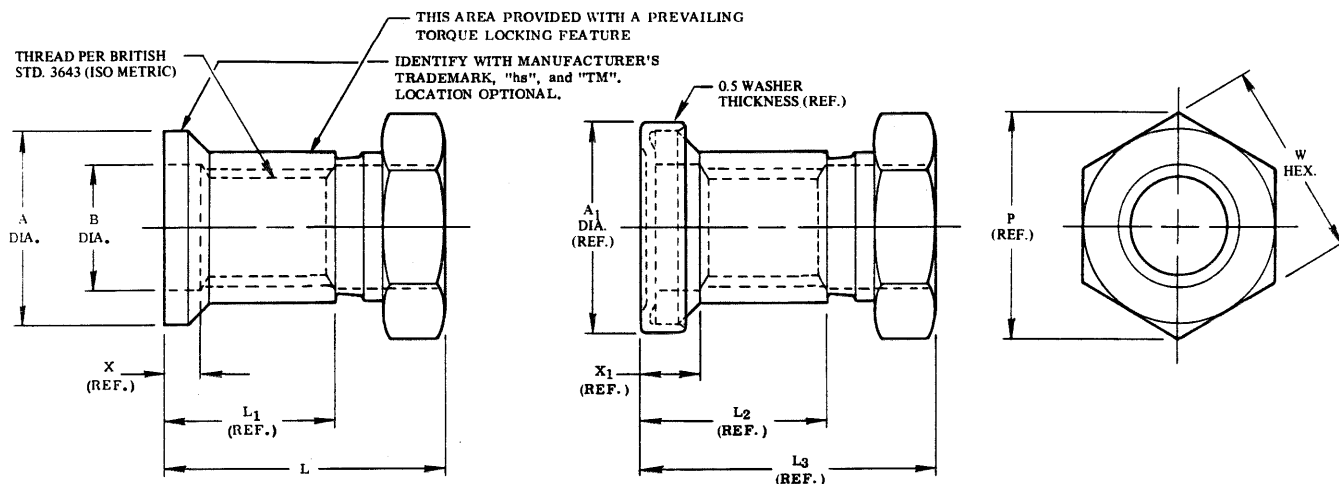


**hi-shear**  
CORPORATION

2600 Skypark Drive  
Torrance, California 90509 U.S.A.  
Telephone (310) 326-8110  
FAX (310) 784-4144

Hi-Shear Corporation, U.S.A. (Patent Holder).....CAGE No. 73197  
Division of Hi-Shear Industries, Inc., U.S.A.  
Air Industries Co. Inc. (Licensee - U.S.A. & Canada).....CAGE No. 06725  
SPS Technologies, U.S.A. (Licensee).....CAGE No. 56878  
Hi-Shear Fasteners Europe Ltd., U.K. (Licensee).....CAGE No. 0LB66  
Division of Hi-Shear Industries, Inc., U.S.A.

KAMAX-WERKE, Germany.....(Licensee-EEC Countries)  
Rudolph Kellerman GmbH & Co.  
SIMMONDS S.A., France.....(Licensee-EEC Countries-Collars)  
SL-CHAMOND GRANAT S.A., France.....(Licensee-EEC Countries)  
TOKYO SCREW COMPANY, Japan.....(Licensee-Japan)



| DASH NO. METRIC | PIN NOM. DIA. | THREAD          | A DIA.         | A1 DIA. (REF.) | B DIA.         | L              | L1 (REF.) | L2 (REF.) | L3 (REF.) | P (REF.) | W (HEX.)       | X (REF.) | X1 (REF.) | TORQUE-OFF NEWTON-METERS | TENSION PRELOAD NEWTONS MINIMUM | ULT TNSN STR NEWTONS MINIMUM |
|-----------------|---------------|-----------------|----------------|----------------|----------------|----------------|-----------|-----------|-----------|----------|----------------|----------|-----------|--------------------------|---------------------------------|------------------------------|
| 04              | 4             | M4 x 0.7-4H5H   | 7.49<br>7.24   | 8.7            | 4.78<br>4.62   | 9.27<br>8.76   | 4.82      | 5.5       | 9.7       | 8.87     | 8.00<br>7.78   | 1.7      | 2.4       | 1.1 - 2.3                | 1200                            | 4000                         |
| 05              | 5             | M5 x 0.8-4H5H   | 8.24<br>7.99   | 9.5            | 5.78<br>5.62   | 9.52<br>9.02   | 5.08      | 5.7       | 9.9       | 11.10    | 10.00<br>9.78  | 1.7      | 2.4       | 2.3 - 3.4                | 1700                            | 5700                         |
| 06              | 6             | M6 x 1.0-4H5H   | 10.77<br>10.52 | 12.2           | 6.78<br>6.62   | 10.92<br>10.41 | 5.71      | 6.5       | 11.5      | 12.12    | 11.00<br>10.73 | 2.3      | 3.1       | 4.5 - 6.2                | 2725                            | 9074                         |
| 08              | 8             | M8 x 1.0-4H5H   | 13.45<br>13.20 | 15.0           | 8.82<br>8.62   | 13.33<br>12.83 | 7.24      | 8.1       | 14.0      | 14.40    | 13.00<br>12.73 | 2.4      | 3.3       | 9.0 - 11.3               | 4000                            | 13400                        |
| 10              | 10            | M10 x 1.0-4H5H  | 16.63<br>16.33 | 17.9           | 10.88<br>10.63 | 14.99<br>14.48 | 8.38      | 9.4       | 15.7      | 15.56    | 14.00<br>13.73 | 2.4      | 3.4       | 18.1 - 22.6              | 7200                            | 24000                        |
| 12              | 12            | M12 x 1.25-4H5H | 21.85<br>21.55 | 23.0           | 12.88<br>12.63 | 18.03<br>17.52 | 9.65      | 10.6      | 18.8      | 18.90    | 17.00<br>16.73 | 2.5      | 3.5       | 24.8 - 31.6              | 8600                            | 28700                        |

**GENERAL NOTES:**

- Go thread gage penetration shall be 3/4 of one revolution minimum.
- Dimensions apply after finish.
- Cetyl alcohol may be applied to DU finish at manufacturer's option.

**MATERIAL:**

- Collar - 7075 aluminum alloy per QQ-S-225/9.  
Washer - 2024 aluminum alloy per QQ-A-250/4 or QQ-A-250/5.

**HEAT TREAT:**

- Collar - Age to T73 condition per MIL-H-6088.  
Washer - Age to T6 condition per MIL-H-6088.

**FINISH:**

- Collar - HSTM77-( ) = Anodize per MIL-A-8625, dye color brown, and cetyl alcohol lube per Hi-Shear Spec. 305.  
HSTM77CM-( ) = Chemical conversion coat per MIL-C-5541, Class 1A, and cetyl alcohol lube per Hi-Shear Spec. 305.  
HSTM77DU-( ) = Anodize per MIL-L-8625, and solid film lube per MIL-L-46010, Type I [3].  
HSTM77TF-( ) = Anodize per MIL-L-8625, and Hi-Kote 2 solid film lube per Hi-Shear Spec. 292.  
Collar & Washer - HSTM77RW-( ) = Collar finish same as HSTM77-( ) and washer with anodize, dye color red.

**⑤ SPECIFICATION:**

Hi-Lite Product Specification M381, except Tension Preload as tabulated.

**CODE:**

Dash number indicates nominal thread size in 1mm.  
See Finish note for explanation of code letters.

**EXAMPLE:**

HSTM77-08 = M8 x 1.0 Hi-Lite ST collar.  
HSTM77RW = M8 x 1.0 Hi-Lite ST collar with aluminum washer.

U.S. Patents 4,326,825; 4,485,510 and 4,957,401.  
Other U.S. and foreign patents pending. "Hi-Lite" is a registered trademark and "Hi-Lite ST" is a trademark of Hi-Shear Corporation.

| DRAWN      | DATE     | BY         | TITLE<br><b>HI-LITE® ST™ COLLAR<br/>(METRIC SERIES)</b><br><br>7075-T73 ALUMINUM ALLOY<br>1mm GRIP VARIATION - SHEAR APPLICATION<br>FOR USE ON STANDARD AND 0.5mm OVERSIZE HI-LITE ST PINS | DRAWING NUMBER<br><br><b>HSTM77</b> |
|------------|----------|------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------|
|            | 9-30-83  | S.Graphics |                                                                                                                                                                                            |                                     |
| APPROVED   | 10-9-83  | E.E.B.     |                                                                                                                                                                                            |                                     |
| ⑤ REVISION | 05-22-96 | J.F.Obispo |                                                                                                                                                                                            |                                     |